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TITLE: Method and system for dynamic pricing

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ABSTRACT: The method and system of the present invention enables Internet businesses to conduct real-time, online experiments on a sample of transactions to determine marketplace sensitivities. Analysis of the results of the experiments reveal optimal values of key market decision variables such as price, content of banner ads, promotion levels, quantity discount schemes, etc. The experiments may be automatically conducted on an on-going basis, or may be conducted on a periodic basis. The method and system of the present invention preferably allow users to modify the nature of the experiment and the propagation of optimal values. The method and system of the current invention can be used for a pure diagnostic purpose or to automate the setting of key market variables.

The dynamic experimentation used by the inventive system reveals the relative stability (or instability) of the networked market within which the business operates. The translation of an optimal value for a key variable (for example, price) to the entire market can be done on a real-time basis.

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Summary of Invention Paragraph - BSTX: [0004] The disclosed invention relates to dynamically pricing goods and services in real-time over the Internet through controlled short-term experiments that determine customer price sensitivity.

Summary of Invention Paragraph - BSTX: [0007] However, e-commerce does not have to be so restricted. The introduction of e-commerce on the Internet has made it easier for Internet merchants to change prices by simply updating a Web page or appropriate database/systems. The costs associated with printing catalogs and marking goods in a bricks-and-mortar setting are typically not present in eCommerce. In addition, it is also possible to offer different prices to different customers without either customer learning the price that has been offered to the other.

Summary of Invention Paragraph - BSTX: [0008] Although it is possible for Internet merchants to update prices at any time, typically they have not done so. One reason for sticking to static pricing strategies is that merchants are accustomed to keeping prices static. In some cases, merchants have both brick-and-mortar shops and Web shops, and want to keep prices in alignment. However, the primary reason why Internet merchants do not dynamically adjust prices

with the ever-changing marketplace is that the merchants do not have the ability to dynamically determine optimal prices.

Summary of Invention Paragraph - BSTX: [0009] The Internet is a dynamic marketplace. As e-commerce becomes a dominant force, the ability to dynamically adjust to and exploit changes in the Internet marketplace becomes critical. An enormous amount of detailed, disaggregate information is being routinely captured during Internet transactions. The ability to gather real-time information on transactions conducted on the Internet means that Internet merchants could use the information to dynamically update their websites to take maximum advantage of market conditions. In particular, real-time transaction information opens up the possibility of dynamic pricing and marketing.

Summary of Invention Paragraph - BSTX: [0018] U.S. Pat. Ser. No. 5,926,817 discloses a client-server system and method for providing real-time access to a variety of database systems, one application of which is "dynamic price quoting." However, the reference uses this phrase to mean computing a single price to be quoted to a customer based on information about the user's requirements and data contained in the supplier's databases. It does not teach or suggest experimentation to determine marketplace customer price sensitivity.

Summary of Invention Paragraph - BSTX: [0026] One embodiment of the invention comprises a method of dynamically determining an optimal price to be charged for a product on an Internet website operated by an Internet merchant, comprising the steps of receiving configuration data from the Internet merchant; randomly sampling visitors to the Internet website according to the configuration data; determining an optimal price using the data acquired from sampling; and displaying the optimal price to the Internet merchant.

Detail Description Paragraph - DETX: [0073] The Dynamic Pricing System may use historical data in its calculations as shown by data 350. In addition, the parameters 365 entered by the Internet Merchant are used in the calculations that the Dynamic Pricing System performs.

Detail Description Paragraph - DETX: [0080] It is easy to change eCommerce prices by simply updating a Web page. In addition, it is possible to present different prices to different online customers without either customer learning the price that has been offered to the other. This may be accomplished by presenting different versions of the Webpage to different potential customers, for example. Because of these reasons, it is possible to perform controlled, real-time experiments on samples of the customer population to determine customer price sensitivities. This information can then be used to determine real-time optimal pricing and marketing strategies for an entire customer population or for selected segments of the customer population. In addition, merchants may learn from the online experiments, and apply this learning to offline counterpart market strategies.

Detail Description Paragraph - DETX: [0088] The system may restrict the input in several ways. For example, the inventive system may require a minimum number of price points. As another

example, the range of prices offered may be restricted to a certain interval by the method and system of the present invention. In this case, the sample sizes and desired statistical accuracies may be specified, and various mechanisms for limiting price changes may be implemented. For example, the price range may be restricted to a low price of cost to the seller to twice the existing price. The inventive system can be configured with preset price limitations to avoid selling or offering products at a loss greater than that desired by the Internet merchant, or can be programmed to require additional user confirmation before selling a price below a predetermined point.

Detail Description Paragraph - DETX: [0094] Experimentation utilizing the dynamic sampling engine 430 may be repeated periodically to ensure that the optimal price is dynamically optimized to regularly compensate for market changes. Thus, experiments utilizing the dynamic sampling engine 430 may be run monthly, weekly, daily, hourly, or more often, until the experimentation becomes, practically speaking, continuous. Dynamic optimization, therefore, is a result of continuous experimentation. The optimum price may, furthermore, be propagated to the web at 435 for offering to customers each time a new optimum price is discovered by the dynamic sampling engine. Alternately either the system or the operator may propagate the optimum price each time the optimum price changes by a particular amount from the previous price such as, for example, \$0.25. Data from the web, such as purchase, timing, and use of promotions by customers may also be provided to the dynamic sampling engine 430 for use in future samples.

Claims Text - CLTX: 1. A method of dynamically determining an optimal price to be charged for a product on an Internet website operated by an Internet merchant, comprising: (a) receiving configuration data from the Internet merchant; (b) randomly sampling visitors to the Internet website according to the configuration data; (c) determining an optimal price using the data acquired in step (b); and (d) displaying the optimal price to the Internet merchant.